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Pharmaceutical use of glycosidic iron complexes to treat anaemia - esp. in piglets, made by reacting iron hydroxide and sugar in presence of alkali

C90-091089

The use of glycosidic iron (II) or iron (III) complexes, prepared by reacting iron (II) and/or iron (III) hydroxide with a (non)reducing sugar in presence of alkali, as a pharmaceutical, opt. in combination with usual carriers and auxiliaries, is new.

**MORE SPECIFICALLY**

Sugars are alpha- or beta-glucose or sucrose, and the compsn. may also include colloidal silicic acid (esp. a 'spermate') to form a free-flowing mass, Vitamin B12, folic acid and/or succinic acid.

**USE/ADVANTAGE**

These complexes are used to treat anaemia, particularly in young pigs (by incorporation at 1-5 kg/tonne into the feed of mother sows).

They are simple and economical to prepare and handle.

BC(5-A3A, 7-A2, 12-H1) 3

and are non-toxic. The Fe(III)-sucrose complex shows almost 100% resorption.

**PREPARATION**

The complexes are formed by reacting the hydroxide and sugar in aq. alkaline soln. at 100-130°C (with evapn. of the water solvent). The complex is taken up in water and mixed with colloidal silicic acid until a free-flowing dry mass is produced. Alternatively, the complex is recovered from aq. soln. by spray-drying.

**EXAMPLE**

A soln. of 8.95 g.  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$  in 300 ml water was treated with 0.5 g. ascorbic acid, stirred until colourless, then 10.6 g.  $\text{Na}_2\text{CO}_3$  in 60 ml water added dropwise. The resulting  $\text{Fe}(\text{OH})_2$  was centrifuged off and rinsed with some water into 90 g. of the dry glucose syrup 01824. 1 g. NaOH was added and the mixt. heated slowly to 100°C.

As soon as the mass began to foam, 100 ml water were added and the black soln. cooled. It contained 14 mg Fe/ml and had pH 7.95.

All steps were done under  $\text{N}_2$ . (9pp1251DAIHDwgNo0/0).

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